



Juan Carlos Araneda

Electrical Engineer graduated at Universidad Técnica Federico Santa María (UTFSM), Chile (1983) and Master of Philosophy in Electrical Engineering at the University of Manchester Institute of Science and Technology (former UMIST), UK (2002).

Working experience of 34 years in the Chilean electricity market:

- Distribution company Chilquinta (1984-1989):
 - Studies engineer – Commercial Management Unit, Grid Projects Evaluation and Planning
- Generation company Colbún (1989-1994):
 - Planning engineer
 - Head of Department – Operational Studies and Planning
- Transmission company Transelec (1994-2014):
 - Head of Department – Planning, Commercial Evaluation and Strategic Planning
 - Manager – Strategic Planning and System Development
- Independent system operator of the Northern Interconnected System, CDEC-SING (2015-2016):
 - Director of Planning and Development
- Independent system operator of the National Electric System, Coordinador Eléctrico Nacional (2017 to date):
 - Transmission Planning Manager

Academic experience:

- Lecturer at Diploma in Electricity Sector Regulation, University of Chile (since 2006)
- Lecturer at Master's Program in Energy Economics, UTFSM (since 2006)
- External supervisor of graduate thesis at several Chilean universities
- Academic visitor at Imperial College London, Power Research Group (2012)

Professional affiliations:

- Senior Member of IEEE (Institute of Electrical and Electronic Engineers)
- Member of CIGRE (Conseil International des Grands Réseaux Électriques):
 - Member of the Board of the Chilean National Committee (2013-2015) and President of the Board (since May 2015)
 - Participant in SC B4 – HVDC and Power Electronics (2008-2009)
 - Participant in SC C1 - System Development and Economics (since 2010):
 - WG C1.24 “Tools for Economically Optimal Transmission Development Plans”, Technical Brochure 572, published in April 2014
 - WG C1.22 “Investment decisions in a changing and uncertain environment”. Presentation at Symposium Dublin (May 2017) and writing under work

- JWG C1/C6.37/CIREN “Optimal transmission and distribution investment decisions under increasing energy scenario uncertainty” (Convenor since May 2017 and JWG under work)
- Attendance to CIGRE Paris Sessions: 2008, 2010, 2012 and 2016

Relevant publications:

- Araneda, J., “Foundations of Pricing and Investment in Electricity Transmission”, Master of Philosophy Thesis, University of Manchester Institute of Science and Technology (UMIST), March 2002.
- Araneda, J. and Rios, S., “Transmission expansion under market conditions: the Chilean experience”, IEEE PowerTech 2005, St. Petersburg, Russia, June 2005.
- Serrano, R., Zolezzi, J, Araneda, J. and Rudnick, H., “Transmission expansion in the Chilean system via cooperative game theory”, IEEE PowerTech 2005, St. Petersburg, Russia, June 2005.
- Araneda, J. and Olguin, G., “Transmission Challenges in the Development of the Aysen-SIC HVDC Project”, International Seminar on HVDC Systems, CIGRE SC B4, Buenos Aires, Argentina, June 2008.
- Araneda, J., “Market Based Transmission Planning: Chilean Experience”, Workshop on Transmission Network Security Standards, Imperial College London, UK, March 2009.
- Rudnick, H., Araneda, J. and Mocarquer, S., “Transmission planning – From a market approach to a centralized one – The Chilean experience”, IEEE General Meeting, Calgary, Canada, Julio 2009.
- Araneda, J. and Martinez, O., “Transmission Planning in the Chilean Electricity Market”, CIGRE Symposium, Guilin, China, October 2009.
- Olguin, G., Araneda, J. and La Fuente, R., “Aysen-SIC HVDC Transmission System: Planning Studies”, CIGRE Session 2010, Paris, France, August 2010.
- Araneda, J., Mocarquer, S., Moreno, R. and Rudnick, H., “Challenges on Integrating Renewables into the Chilean Grid”, PowerCon 2010, Hangzhou, China, October 2010.
- Araneda, J., Rudnick, H., Mocarquer, S. and Miquel, P., “Lessons from the 2010 Chilean earthquake and its impact on electricity supply”, PowerCon 2010, Hangzhou, China, October 2010.
- Traub, F., Sauma, E., Vera, J. and Araneda, J., “Un enfoque de optimización robusta para la planificación de redes eléctricas bajo incertidumbre”, XIV ERIAC (Regional CIGRE), Paraguay, May 2011.
- Araneda, J. and Valpuesta, R., “Integrating Renewable Energy into the Chilean Grid”, CIGRE Session 2012, Paris, France, August 2012.
- Araneda, J., “Competitive Transmission Planning and Delivery in Chile: An Example”, Conference on the International Experience in Transmission Planning and Delivery, Imperial College London, UK, January 2013.
- Bones, D., M. Wulff, Araneda, J., et al, “Tools for Economically Optimal Transmission Development Plans”, CIGRE, Working Group C1.24, Technical Brochure 572, April 2014.
- Araneda, J. and Valpuesta, R., “Integrating Renewables into the Chilean Grid”, Transmission & Distribution World magazine, July 2014.
- Araneda, J. and Valpuesta, R., “Transmission Investment Evaluation in the Chilean Electricity Market”, CIGRE Session 2014, Paris, France, August 2014.
- Araneda, J. and Müller-Mienack, M., “Transmission Network Planning and Delivery: comparing the German and Chilean Experiences”, CIGRE Session 2016, Paris, France, August 2016.
- Araneda, J., “Experiencia del Mercado Eléctrico Chileno”, IEEE Transmission & Distribution Latin America 2016 Conference, Morelia, México, September 2016.

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